



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO.       |
|--|-------------|----------------------|-------------------------|------------------------|
| 10/527,757   | 03/10/2005  | Christian Schott     | 6305-0010WOUS           | 3200                   |
| 35301 7590 12/28/2007<br>MCCORMICK, PAULDING & HUBER LLP<br>CITY PLACE II<br>185 ASYLUM STREET<br>HARTFORD, CT 06103 |             |                      | EXAMINER<br>CHIU, TSZ K |                        |
|  |             |                      | ART UNIT<br>2822        | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>12/28/2007 | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

TH

**Office Action Summary**

Application No.

10/527,757

Applicant(s)

SCHOTT ET AL.

Examiner

Tsz K. Chiu

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

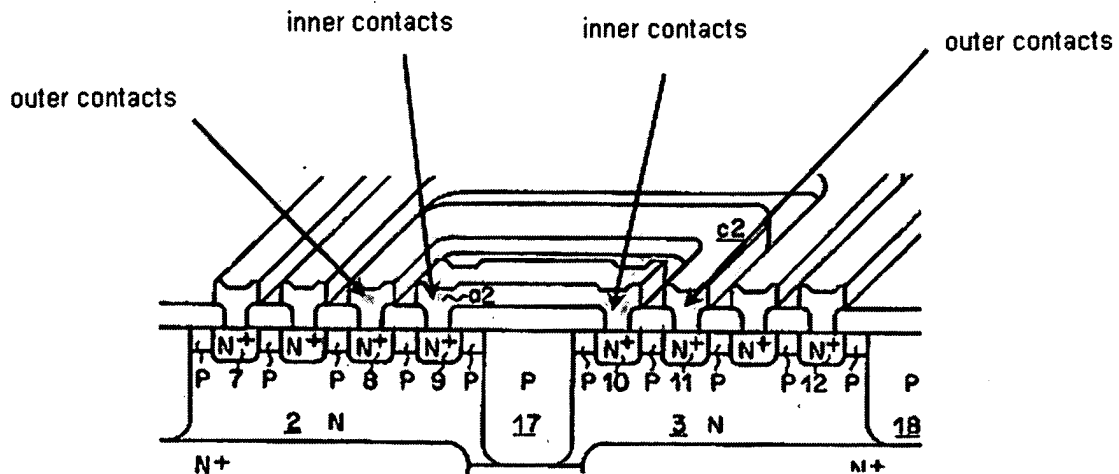
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Popovic et al. (4829352)

With respect to claim 12, Popovic discloses a Hall element (Figure 6) that has four contacts, said four contacts being two inner and two outer contacts (area of 9, 10, 8 and 11, For example Fig. 6, see drawing below) arranged along a straight line, a first of said two outer contacts and a first of said two inner contacts being configured for supply and discharge of current flowing through the hall element and a second of said two outer contacts and a second of said two inner contacts being configured for tapping a hall voltage, wherein the two inner contacts (9 and 10, For example Fig. 6, see drawing below) are the same width and wherein the two outer contacts (8 and 11, For example Fig. 6, see drawing below) are the same width, wherein said four contacts are arranged on a surface of a well (2, 3, For example Fig. 6) of a first conductivity type that is embedded in a substrate of a second conductivity type and wherein the two outer contacts (8 and 11, For example Fig. 6, see drawing below) are connected by an additional resistor (internal resistor when connected the electrode a2 and c2, For example Fig. 6).



With respect to claim 13, Popovic discloses wherein said additional resistor (internal resistor when connected the electrode a2 and c2 , For example Fig. 6) is formed by an additional well (2,3, For example Fig. 6) of the first conductivity type embedded in said substrate.

With respect to claim 14, Popovic discloses wherein said Hall element (Figure 6) further has a fifth contact arranged next to one of the two outer contacts (8 and 11, For example Fig. 6) of the Hall element (Figure 6) on a side facing an adjacent edge of the well (2,3, For example Fig. 6) so that said additional resistor is formed in the well of the hall element between said fifth contact and the adjacent outer contact.

With respect to claim 15, Popovic discloses said Hall element (Figure 6) further has fifth contact and a sixth contact that are each arranged next to one of the outer contacts of the Hall element (Figure 6) on a side facing an adjacent edge of the well (2,3, For example Fig. 6), and that are connected via a conductor path so that said additional resistor is formed in the well of the hall element between said fifth contact and

the respective adjacent outer contact and between said sixth contact and the respective adjacent outer contact.

With respect to claim 16-19, Popovic discloses wherein at least one electrode (a2, For example Fig. 6) electrically insulated from the well (2,3, For example Fig. 6) is arranged between two contacts.

With respect to claim 20-23, Popovic discloses a doping of the well (2,3, For example Fig. 6) in the areas between an inner contact and an outer contact (9,10, 8 and 11, For example Fig. 6).

With respect to claim 24, Popovic discloses a Hall element (Figure 6) that has four contacts, said four contacts being two inner and two outer contacts (9,10, 8 and 11, For example Fig. 6) arranged along a straight line, a first of said two outer contacts and a first of said two inner contacts being configured for supply and discharge of current flowing through the hall element and a second of said two outer contacts and a second of said two inner contacts being configured for tapping a hall voltage, wherein the two inner contacts (9 and 10, For example Fig. 6) are the same width and wherein the two outer contacts (8 and 11, For example Fig. 6) are the same width, wherein said four contacts are arranged on a surface of a well (2,3, For example Fig. 6) of a first conductivity type that is embedded in a substrate of a second conductivity type and wherein at least one electrode (a2, For example Fig. 6) electrically insulated from the well (2,3, For example Fig. 6) is arranged between two contacts (9,10, 8 and 11, For example Fig. 6).

With respect to claim 25, Popovic discloses a Hall element (Figure 6) that has four contacts, said four contacts being two inner and two outer contacts (9,10, 8 and 11, For example Fig. 6) arranged along a straight line, a first of said two outer contacts and a first of said two inner contacts being configured for supply and discharge of current flowing through the hall element and a second of said two outer contacts and a second of said two inner contacts being configured for tapping a hall voltage, wherein the two inner contacts (9 and 10, For example Fig. 6) are the same width and wherein the two outer contacts (8 and 11, For example Fig. 6) are the same width, wherein said four contacts are arranged on a surface of a well (2,3, For example Fig. 6) of a first conductivity type that is embedded in a substrate of a second conductivity type and wherein a doping of the well (2,3, For example Fig. 6) in an area between the two inner contacts (9 and 10, For example Fig. 6) is different to a doping of the well (2,3, For example Fig. 6) in the areas between an inner contact and an outer contact (9,10, 8 and 11, For example Fig. 6).

With respect to claim 26, Popovic discloses a first a Hall element (Figure 6) that has four contacts, said four contacts being two inner and two outer contacts (area of 9,10, 8 and 11, For example Fig. 6, see drawing below) arranged along a straight line, a first of said two outer contacts and a first of said two inner contacts being configured for supply and discharge of current flowing through the hall element and a second of said two outer contacts and a second of said two inner contacts being configured for tapping a hall voltage, wherein the two inner contacts (9 and 10, For example Fig. 6, see drawing below) are the same width and wherein the two outer contacts (8 and 11, For

a second Hall element (Figure 6) that has four contacts, said four contacts being two inner and two outer contacts (area of 9, 10, 8 and 11, For example Fig. 6, see drawing above) arranged along a straight line, a first of said two outer contacts and a first of said two inner contacts being configured for supply and discharge of current flowing through the hall element and a second of said two outer contacts and a second of said two inner contacts being configured for tapping a hall voltage, wherein the two inner contacts (9 and 10, For example Fig. 6, see drawing above) are the same width and wherein the two outer contacts (8 and 11, For example Fig. 6, see drawing above) are the same width, wherein said four contacts are arranged on a surface of a well (2, 3,

For example Fig. 6) of a first conductivity type that is embedded in a substrate of a second conductivity type and wherein the two outer contacts (8 and 11, For example Fig. 6, see drawing above) are connected by an additional resistor (internal resistor when connected the electrode a2 and c2 , For example Fig. 6), wherein the first and second straight line run in parallel and wherein the contacts of the first and second Hall element (Figure 6) are wired via conductor paths in such a way that the first Hall voltages of the first Hall element (Figure 6) and the second Hall voltages of the second Hall element (Figure 6) are equidirectional.

***Response to Arguments***

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tsz K. Chiu whose telephone number is 517-272-8656. The examiner can normally be reached on 0800 to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra V. Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

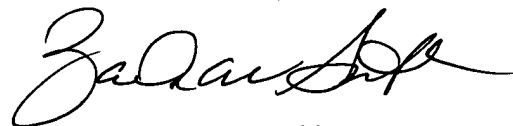


Application/Control Number:  
10/527,757  
Art Unit: 2822

Page 8

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC  
December 21, 2007

  
Zandra V. Smith  
Supervisory Patent Examiner  
20 Dec 2007